

began. Now that our four children are a little older and I would like to concentrate more on my work I find that reorganisation of the NHS for the second time in 10 years has left me in a backwater, and although there are pious ideas about how to train me they are very unlikely to come to anything. I will probably be replaced by a general practitioner, and whether he or she is "trained" in paediatrics or not does not seem to be open to discussion. This would not happen if it were not for the fact that most people in community health are women who work part-time and appear to have no influence in medical politics.

I would not advise any woman to take up medicine, because unless she continues full-time practice however hard she tries to keep up any kind of satisfying career she is doomed to failure and no support from the rest of the profession, or so it seems to me.

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### The legal threat to medicine

SIR,—I am greatly obliged to Dr J D J Havard (leading article, 27 February, p 612) for his lucid resumé of some of the problems which face the medical profession following the cloud-cuckoo pronouncement of the Director of Public Prosecutions that: "doctors who deliberately speed death could face the prospect of life imprisonment."

I had the privilege of being a student in one of the great hospitals in wartime London. The hospital housed one of the two units for the treatment of cancer by radium which remained active in London at that time. The person in charge of cancer therapy by radium and deep x-rays was a man of considerable wisdom, great knowledge, and high integrity. On one of his evening rounds, I recall, he stopped by the bedside of a woman in one of the two cubicles near the door of a 10-bedded ward. She had been in the unit on treatment for eight weeks or more.

During the examination one noticed the gleam of warm response in her sunken eyes when he spoke to her. One noticed the yellow skin, match-like limbs, and swollen abdomen: the dry bluish lips, the drip, and the puncture marks of arms, legs, and abdomen. The nurse who had been holding her hand and tending her helped with great gentleness to half turn her so that he could see her bed-sores. She was, of course, one in whom the delaying action of the treatment had been lost.

Outside the ward the technical synopsis of her history, course, and treatment was laid before us. The sister, the housesurgeon, and we few students listened and then followed him to another ward. Three days later on his round the same patient could barely raise her lids: the lustre had almost left her eyes. He did not ask to see her back.

Outside the ward he walked a little way down the corridor. Then he stopped. We stood round in a small circle. He looked at his houseman and nodded briefly. "Tonight," he said. Then he turned and continued his round.

When it was appropriate one or other of the houseman's colleagues would administer the 10 or 15 grains of morphine or the intraperitoneal insulin. Next day there would be an empty bed in the ward. But never for long.

From time to time in general practice near the end of a long terminal illness when life had been prolonged for weeks or months by

all reasonable means, it has occasionally been my duty to ease the passing of a spirit from a spent body. If this be "to speed death" then so be it. I stand with many another family doctor, I could almost say with any doctor worth his salt, who has withstood the pleadings of patient, relatives, and friends to "give her (or him) something," until such time as it was clear with one's intimate knowledge of the circumstances that this was the right and proper thing to do.

It seems to me that the DPP would be better employed to turn his attention to those growing elements in our society which unlawfully threaten and too frequently damage life and limb; the element which stirs up unrest and causes affrays; the element which mindlessly attacks the unwary, the innocent and the unprotected.

No one can blame the DPP for being interested in cases concerning life-support and abortion. These have been much in the public eye. Facets of the subjects have been bandied about often with much uninformed ballyhoo by the media. But we can blame him for failing to seek informed advice from the leaders of the profession in the BMA and the royal colleges. Until he is prepared to do this, in my view, he should stick to things he understands.

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### Sinus arrest during treatment with amiodarone

SIR,—We thank Dr A K Jones (27 February, p 664) for drawing attention to the possible role of digoxin in patients with sinus node arrest during treatment with amiodarone. Limitation of space precluded a full discussion of possible underlying mechanisms of sinus arrest in our paper (16 January, p 160), but we too are concerned that drug interaction may have been important in these cases.

It is known that amiodarone alone may cause sinus bradycardia<sup>1</sup> or sinoatrial block<sup>2</sup> in man. Combined sinus node depression and atrioventricular block has been described in four cases in the French literature to our knowledge: one of these patients was taking quinidine and digoxin in addition to amiodarone,<sup>3</sup> and further information is not available on the other three patients (thesis of M J Franchiset-Garnier, Paris 1971). Indeed, Berkman *et al*<sup>3</sup> have warned about the combined use of amiodarone and digoxin, especially in patients with known disease of the conduction system, as was the case in our patients. We have since observed a third similar case again in a patient taking digoxin. Although amiodarone may increase the serum concentration of digoxin by about 70%, however, we measured a digoxin concentration (2.2 µg/l) that was at the upper end of the normal range for our laboratory, in case 2, at the time of sinus arrest. Thus, we cannot agree that the clinical findings in this patient at least may be easily attributed to an action of digoxin alone. Until this question is specifically answered, it seems more reasonable to postulate either an amiodarone effect alone or interaction between the different cardio-active agents prescribed.

Experimentally, amiodarone inhibits phase-4 depolarisation of the sinus node in the rabbit<sup>4</sup> and has non-competitive adrenergic receptor antagonist activity in the myo-

cardium and in blood vessels.<sup>5</sup> Amiodarone prolongs corrected sinus node recovery time and intra-atrial conduction in man<sup>6</sup>—observations which may be relevant to our patients' clinical course. Of particular importance is the absence of an adequate escape focus in these patients, thus necessitating close observation of patients starting amiodarone, especially when combination treatment is being used. The presence of conduction system disease may identify patients at particular risk.

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<sup>1</sup> Modica G, DiFazzio S, Timpanaro V, Centamore G. *Boll Soc Ital Cardiol* 1977;22:1985-91.

<sup>2</sup> Alboni P, Fischer DM. *G Ital Cardiol* 1973;3:288-90.

<sup>3</sup> Berkman M, Benaim R, Chapelle M. *Coeur Med Interne* 1975;14:439-47.

<sup>4</sup> Goupil N, Lenfant J. *Eur J Pharmacol* 1976;39:23.

<sup>5</sup> Polster P, Broekhuysen J. *Biochem Pharmacol* 1976;25:131-4.

<sup>6</sup> Touboul P, Atallah G, Gressard A, Kirkorian G. *Br Heart J* 1979;42:573-8.

### Captopril in renovascular hypertension: long-term use in predicting surgical outcome

SIR,—Dr A B Atkinson and his colleagues describe a correlation in patients with renal arterial disease between the blood pressure during long-term captopril treatment and the blood pressure after subsequent surgery (6 March, p 689). They thought the agreement remarkably close and suggested that it predicted surgical success or failure accurately. In fact, the correlation observed was only modest and of rather low predictive value. Moreover, blood pressure during long-term captopril was not the best predictor of surgical outcome among the data which the authors tabulated. As shown in the accompanying table of correlation coefficients (Spearman *r*, using mean arterial pressure); the correlations with age were higher, and inspection of scatter diagrams confirms that age was a more accurate predictor of surgical response. A similar relation between age and

*Correlations (Spearman *r*) between various patient characteristics and the blood pressure after surgery in 10 patients with renal arterial lesions, from data tabulated by Atkinson *et al*.*

	Blood pressure after operation	
	Outpatient	Inpatient
Long-term captopril blood pressure (inpatient)	0.73	0.75
Long-term captopril blood pressure (outpatient)	0.65	0.67
Pre-captopril blood pressure (inpatient)	0.62	0.77
Serum creatinine concentration	0.65	0.62
Age	0.87	0.81

the response to surgery in renovascular hypertension has been noted in at least one previous study.<sup>1</sup> Needless to say, age can be determined more simply, accurately, and safely than can the response to long-term captopril treatment, and it is unfortunate that the authors overlooked this potentially useful relationship.

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<sup>1</sup> Maxwell MH. *Kidney Int* 1975;8, suppl 5:153-60.